

REMARKS

Claims 2 and 11-15 are pending in the present application, claims 1 and 3-10 having been canceled. The Examiner rejected claims 2 and 11-15 under 35 U.S.C. §112, 1st paragraph, 35 U.S.C. §112, 2nd paragraph, and under 35 U.S.C. §103(a).

Section 112, paragraph 1 Rejections:

Claims 2 and 11-15 were rejected under 35 U.S.C. §112, 1st paragraph, for failing the enablement requirement. The Examiner alleged that the drawings were confusing and unclear, and that reference characters in the specification were not found in the drawings. The Examiner also does not understand the relationship between FIGS. 1 and 5.

Applicant has amended FIGS. 1, 4, 5 and 6, and the corresponding text in the specification. Specifically, FIG. 1 was amended to include labels I_1 and I_2 to identify image planes, and the corresponding text on pages 3 and 4 was amended to incorporate these image labels, to refer to FIG. labels f and f' , and to correct the reference to labels L_1 and L_2 to read D_1 and D_2 , so as to correspond to the drawing figure.

FIG. 4 was amended to remove the best entry point labels.

FIGS. 5 and 6 were replaced with flowcharts with reference numbers identifying the steps, and the corresponding text on pages 12-13 of the specification was amended to incorporate these reference numbers.

Applicant urges that the drawing figures and corresponding description now correspond to each other, and are not confusing.

FIGS. 1 and 5 illustrate different embodiments of the invention. FIG. 1 illustrates needle placement by visual servoing in 3 successive planes, using 2 views, while FIG. 5 illustrates a method for finding the best entry point for percutaneous procedures. The method of FIG. 5 forms the subject matter of claim 1, and is distinct from the subject matter illustrated in FIG. 1, although it can be used in conjunction with the subject matter illustrated in FIG. 1. FIG. 6 illustrates the subject matter of claims 2

and 11. Applicant urges that claims 2 and 11 are enabled by the description of FIG. 6. Reconsideration and withdrawal of these section 112 rejections are respectfully requested.

Section 112, paragraph 2 Rejections:

Claims 2 and 11-15 were rejected under 35 U.S.C. §112, 2nd paragraph as being indefinite for the reasons presented above.

Applicant urges that, with the amendments made in connection with the enablement rejection, claims 2 and 11-15 are not indefinite.

Claims 2 and 11, and corresponding FIG. 6, are quite clear and explicit in the recitation steps *for use in conjunction with a C-arm imaging apparatus, for positioning a biopsy needle from a given entry point on a patient to a given target for biopsy*. Reconsideration and withdrawal of this section 112 rejection are respectfully requested.

Section 103 Rejections:

Claims 2 and 11-15 were rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,799,055 (Peshkin, et al.)

Applicant respectfully traverses this rejection.

Applicant urges that the Examiner has failed to make out a *prima facie* case of obviousness for these rejections. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must be found in the prior art and not be based on applicant's disclosure.

Peshkin is directed to a system and method for using 2 fluoroscope images displayed simultaneously to guide a surgical procedure. The section of Peshkin cited by the Examiner (Col. 7, line 24 to Col. 9, line 13) discloses allowing the surgeon to select the point of entry for the surgical instrument by moving the top point of the projected guidewire in the A/P image area, adjusting the bottom point of the projected guidewire to specify the transverse and sagittal angle, and adjusting the top point of the projected guidewire to specify the position on the line of sight and the bottom point of the projected guidewire to specify the sagittal and transverse angle in the sagittal image area to select the desired position and orientation of the surgical instrument into the body. Once the sagittal and A/P image are registered, the computer will display selected points or lines in one of the A/P image or the sagittal image as corresponding projections on the other image. This sequence of steps does not disclose or suggest the steps recited in Applicant's claim 2 and 11.

Peshkin's written description discloses that the 2 images are an anterior/posterior (A/P) image and a sagittal image. Although Peshkin refers to an image and a second image in the "Aspects of the Invention" section, the only images discussed in the "Detailed Description of the Drawings" are the A/P and sagittal images. Furthermore, these are images based on body centered axes, not images *formed with said C-arm in said first position is formed in a first image plane and formed with said C-arm in said second position is formed in a second image plane*, as essentially recited in claims 2 and 11.

In addition, Peshkin discloses, *inter alia*, registering the A/P and sagittal images to the patient's body, and requires the use of fiducial markers or artifacts of known geometry to register the fluoroscopic images to the patient. Applicant's methods do not require the simultaneous display of 2 X-ray images, do not require registration of the X-ray images used for the alignment nor registration of the X-ray images to the patient's body, and do not require the use of fiducial markers.

Although Peshkin does acknowledge the importance of positioning the end point of the device (Col. 1, lines 25-30), as noted by the Examiner, Peshkin nowhere discloses or suggests a method for *positioning a biopsy needle from a given entry point on a patient*

to a given target, as essentially recited in claims 2 and 11. The Examiner only generally refers to Peshkin as disclosing a method for positioning a biopsy needle substantially as claimed in claims 2 and 11, but does not otherwise provide any specific references to those features of Peshkin present in the method recited in Applicant's claims 2 and 11. If the Examiner insists on using Peshkin as a reference, he is invited to point out with particularity those aspects of Peshkin that disclose the steps of Applicant's claim 2 and 11. Further regarding claim 2, the Examiner concedes that Peshkin does not explicitly disclose storing location information of the targets, but contends it would be obvious to do so. However, as noted above, Peshkin fails to disclose the other limitations of Applicant's claim 2. Thus, Applicant urges that claims 2 and 11 are not obvious over Peshkin. Reconsideration and withdrawal of these section 103 rejections are respectfully requested.

Claims 12-15 depend from claim 11, and are thus patentable for at least the same reasons as claim 11. Reconsideration and withdrawal of these rejections are respectfully requested.

CONCLUSION

Applicant urges that claim 2 and new claims 11-15 are in condition for allowance for at least the reasons stated. Early and favorable action on this case is respectfully requested.

Respectfully submitted,

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